

NITRIC OXIDE-RELEASING METALLIC MEDICAL DEVICES

ABSTRACT

Biocompatible metallic medical devices having silanized surfaces coupled to nucleophile residues that release sustained, therapeutic amounts of nitric oxide to specific sites within a mammalian body are provided. Additionally, the biocompatible metallic medical devices can also be provided with anti-thrombogenic, lubricious coatings that release sustained, therapeutic amounts of nitric oxide. Moreover, the silanized metallic devices are surprisingly durable when exposed to harsh chemical methods often needed to bind nitric oxide-releasing functional groups to nucleophile residues. Furthermore, methods are provided for producing stable, silanized, sustained nitric oxide-releasing metallic medical devices.